

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/552,610  
Source: TFW0  
Date Processed by STIC: 02/21/2007

***ENTERED***



IFWO

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/552,610**

**DATE: 02/21/2007**  
**TIME: 14:07:54**

**Input Set : A:\00952982.TXT**  
**Output Set: N:\CRF4\02212007\J552610.raw**

```

3 <110> APPLICANT: University Court of The University of Dundee
4     Smith, Gillian
5     Ibbotson, Sally H
6     Wolf, Charles R
8 <120> TITLE OF INVENTION: CYP2S1 AS TARGET FOR DIAGNOSIS AND THERAPY OF SKIN DISEASES
10 <130> FILE REFERENCE: 03981/0203467-US0
12 <140> CURRENT APPLICATION NUMBER: 10/552,610
13 <141> CURRENT FILING DATE: 2005-10-04
15 <150> PRIOR APPLICATION NUMBER: PCT/GB2004/001453
16 <151> PRIOR FILING DATE: 2004-04-05
18 <150> PRIOR APPLICATION NUMBER: GB0307914.2
19 <151> PRIOR FILING DATE: 2003-04-05
21 <160> NUMBER OF SEQ ID NOS: 10
23 <170> SOFTWARE: PatentIn version 3.1
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 18
27 <212> TYPE: DNA
28 <213> ORGANISM: Artificial Sequence
30 <220> FEATURE:
31 <223> OTHER INFORMATION: Primer
33 <400> SEQUENCE: 1
34 ccatgccttc ctgctgaa                                         18
37 <210> SEQ ID NO: 2
38 <211> LENGTH: 24
39 <212> TYPE: DNA
40 <213> ORGANISM: Artificial Sequence
42 <220> FEATURE:
43 <223> OTHER INFORMATION: Primer
45 <400> SEQUENCE: 2
46 gcatgttctt gttggtaat tctg                                         24
49 <210> SEQ ID NO: 3
50 <211> LENGTH: 25
51 <212> TYPE: DNA
52 <213> ORGANISM: Artificial Sequence
54 <220> FEATURE:
55 <223> OTHER INFORMATION: Primer
57 <400> SEQUENCE: 3
58 tggcacagga ggaacaaaaac ccagg                                         25
61 <210> SEQ ID NO: 4
62 <211> LENGTH: 18
63 <212> TYPE: DNA
64 <213> ORGANISM: Artificial Sequence
66 <220> FEATURE:

```

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/552,610

DATE: 02/21/2007  
TIME: 14:07:54

Input Set : A:\00852982.TXT  
Output Set: N:\CRF4\02212007\J552610.raw

```

67 <223> OTHER INFORMATION: Primer
69 <400> SEQUENCE: 4
70 cctgcaggcc cgctacta
73 <210> SEQ ID NO: 5
74 <211> LENGTH: 22
75 <212> TYPE: DNA
76 <213> ORGANISM: Artificial Sequence
78 <220> FEATURE:
79 <223> OTHER INFORMATION: Primer
81 <400> SEQUENCE: 5
82 ttggtctcgt actccacaac ca
85 <210> SEQ ID NO: 6
86 <211> LENGTH: 26
87 <212> TYPE: DNA
88 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: Primer
93 <400> SEQUENCE: 6
94 tcctccaagg tccaccccaa ctctgt
97 <210> SEQ ID NO: 7
98 <211> LENGTH: 20
99 <212> TYPE: DNA
100 <213> ORGANISM: Artificial Sequence
102 <220> FEATURE:
103 <223> OTHER INFORMATION: Primer
105 <400> SEQUENCE: 7
106 ccgtatttcc tgcgcttcat
109 <210> SEQ ID NO: 8
110 <211> LENGTH: 20
111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial Sequence
114 <220> FEATURE:
115 <223> OTHER INFORMATION: Primer
117 <400> SEQUENCE: 8
118 ttccccttct ttggggaaac
121 <210> SEQ ID NO: 9
122 <211> LENGTH: 27
123 <212> TYPE: DNA
124 <213> ORGANISM: Artificial Sequence
126 <220> FEATURE:
127 <223> OTHER INFORMATION: Primer
129 <400> SEQUENCE: 9
130 caggaacttc ctccgctgca gtaccat
133 <210> SEQ ID NO: 10
134 <211> LENGTH: 10000
135 <212> TYPE: DNA
136 <213> ORGANISM: Human
138 <400> SEQUENCE: 10
139 aaaggatggg gtgaggtgat ggggtgagga tgtaggataa tgggacagga tgagcagtgg

```

18  
22  
26  
20  
20  
27  
60

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/552,610**

**DATE: 02/21/2007**  
**TIME: 14:07:54**

**Input Set : A:\00852982.TXT**  
**Output Set: N:\CRF4\02212007\J552610.raw**

141	gatgaggggta	tggaatgaag	gactggataa	gggatagggtg	ggggtaaatg	agagcatggg	120
143	ggaggcagtg	ctctcctgat	ggtgggggtgc	acgagtggat	ggatgacagg	ataaataggg	180
145	aagggaggag	ggataggatg	acgagacggc	tgtagaagcc	cagaggcagag	aacattgctg	240
147	ctttggggtc	gatgtatgaa	tcacacctaac	tcactgacac	tattccca	cacggatgtat	300
149	gctcacagaa	tctggggaaag	tccaaggcct	ggaagcagga	ctcatcttgg	acttcccctt	360
151	ctatcttagt	ccaggtgctg	aatgaggcac	ctctgaagaa	gagaaaggag	agagactaag	420
153	ataaaacaaga	ctgagaggaa	aaaatcagag	tgggcaggca	gagtggcct	gttaaagtgg	480
155	accacagagc	agacaggctg	tggcttagcc	ttggacagca	ggtgggggttc	cagagccata	540
157	tgcttgagg	agccttagca	aactaaatcc	cccacgcgtt	tcttaaaccc	atccatcaca	600
159	cagctgccca	gaaccctggg	gttggcagct	tccagaatgg	ttaggaaaat	ccacagtagt	660
161	gttcaggcgc	ggtggctcat	gcctgtatc	ccagcactt	ggqaagccaa	ggcaggcgga	720
163	tcacttaggtc	aggagatcga	aaccatactg	gttaacacgg	tgaaaccccg	tctctactaa	780
165	aaataaaaaa	aattagctgg	gcatggtggc	atgcgcctgt	aatccca	actcgggagg	840
167	ctggggcagg	agaatcactt	gaaccggga	ggcagatatt	gcagtggc	gagatcgcgc	900
169	cattgcactc	cacctggca	acagagcgag	actccgtctc	aaaaaaaaaa	aaagaaaagaa	960
171	agaaaaaagaa	aatccacagt	agggggccag	acacaaaaat	gatcactcca	gcactgtcca	1020
173	gcccgatca	gagggtttct	gatggaaatg	agctggggtc	agggcaagga	gtggtgaaaa	1080
175	aagtccaggct	gttttcagct	gaactataca	aatgggcata	tcctggccca	gggtggggat	1140
177	ttggcattgc	agaaaggcca	gaatccaccc	ggaatcactc	agttactgtg	aaatctatct	1200
179	tgggaaccta	agaatgttt	ctttctagac	tttgagaaattt	ttggacactt	attgttttct	1260
181	ggatgaattt	tagagattt	taaattgtat	tgaaagtgtt	tattcgacaa	gatgtttatt	1320
183	gagcatccac	agtgtgttag	gcactggga	tacagcaaca	cacaaaacag	acagagaatc	1380
185	ggcccttatg	gagagaccat	ttcagtgaaa	aaagggagta	aaaaaaaaagca	aatcaaggtc	1440
187	gggagcagtg	gctccacca	gtaatcccag	aactttggga	ggccgaggca	ggtggatcgc	1500
189	ttgagccctg	ggcaacatag	ctaaaccctg	tctctacaaa	aaattagcca	ggcatggagc	1560
191	gcgtacctgt	agtccca	actcaggagg	tcgaggcagg	aggatcgctg	acatctgtga	1620
193	ggcagaggct	tcagtggca	gagatcacac	tactgcactc	cagcttaggc	aacagagcaa	1680
195	aaactctgtct	ttaaaaaaa	aaaaaaatgt	gccggggcagg	gccggggccca	gtggctcatg	1740
197	cctgtataac	cagaactttg	ggaggccaa	gtgggtggat	cacttgagtg	aggtcagaag	1800
199	ttcaagacca	gcctggccaa	catggtggaaa	ccctgtctct	actaaaaata	caaaaattag	1860
201	ctaggcatgg	tgtcacatgc	ctgttagtccc	agctactcag	gaagctgagg	caggagtatc	1920
203	acttgaatcc	aggaggcaga	ggttgcagtg	aacggagatc	acaccactgc	actccagcct	1980
205	gggcaacaag	tgtggactc	catctcaaaa	aagaaaatgt	atcaatatat	aaaatataaa	2040
207	aagacaaaaaa	ataatatacgt	ttggcaatga	tgtggaggaa	aggaaaacata	ccctgttggt	2100
209	gagaatgtaa	attagtccag	ccactatgag	aaacagtatg	gaaatttctc	aaaaaaactat	2160
211	cataagggct	gggtgcggtg	gctcacgcct	gtaatcccag	cactttggga	ggccgagggtg	2220
213	ggtggatcac	aaggctcagga	gatccagacc	atcctggcta	acacggtaa	accccgctc	2280
215	tactaaaaat	acaaaaaaa	aaaaaaatgt	gctggccatg	gcggcgggca	cctgttagtcc	2340
217	cagctactca	gaaggctgag	gcaggagaat	ggcgtgaacc	caggaggcga	agttgcagt	2400
219	gagccgagat	ggcaccactg	cactccagca	tggggcagac	agcaagactc	cacatctcaaaa	2460
221	aacaaaca	aaacaatcat	atgtatccac	aatccacta	ctggaaattt	atggaaagga	2520
223	aaagaaaatca	gtgtatcaaa	gggatagcta	cacagcaatg	tttattacag	cactattcac	2580
225	aatagcaaaag	atatggatc	aacctaaatg	tccatcaaca	gatgaatgg	taaagaatat	2640
227	gtggatcacatc	tacacaatgg	aaaactatgtt	ggccgtttaga	aaaagaataa	aatccgtca	2700
229	tttgcagcaa	catgtgaaac	tgtctgtccc	tacagggttg	acaagaactg	caagccaggt	2760
231	tctagataga	aatataatta	agcattggct	gggcacagtg	gctcacaccc	gtaatcccag	2820
233	cactttgcga	ggccgagggtg	ggcagatcac	ttgaggcag	gtgttcgaga	ccagcctggc	2880
235	caacatggtg	aaaccctgtc	tctactaaaa	atacaaaaag	tagctgggtg	tgtggcagg	2940
237	tgcctgtat	ctcagctact	ttggaggcct	aggcagaatt	gcttgaaccc	gggaggcaga	3000

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/552,610

DATE: 02/21/2007

TIME: 14:07:54

Input Set : A:\00852982.TXT

Output Set: N:\CRF4\02212007\J552610.raw

239	ggttgcagtg agccgagatc atgccattgc actccccgt tgggtacag agtgagactc	3060
241	aaaaaaaaaaa aaaaaaaaaaaga aaaagaaaaga aagaaagaaa attaagcatt aatcatgctg	3120
243	cactttggtc cacttccttg ttgctgaaag ccacatagct ctagatgctg accatggta	3180
245	tcccccattgt tcttatagac agcatcgctg accttagaat catgatgtt ttgttaagga	3240
247	tcacgtcaga tgtttttgg acccccaatt ccagccacca gtttgaagac ccctacagag	3300
249	gatggggatt gtcaggcctc tgagcccaag ctaagccatc acatcccctg tgacctgcac	3360
251	gtatacatct agatggcctg aagtaactga agaatcaca aagaagtgaa aatggcctgt	3420
253	tcctgcctta actgatgaca ttaccccttgc aaattcccttc tcctggctca tcctggctca	3480
255	aaagctcccc ggctgaacac cttgtgaccc ccacccctgc cagccagaga acaacccct	3540
257	ttgactgtaa tttccacta cctacccaaa tcctataaaa cggcccccacc cctatctccc	3600
259	ttcactgact cttttggac tcagccggcc tgcacccagg taaaaataaac agccttgtt	3660
261	ctcacacaaa gcctgttgg tggctcttc acacggacgc gagtgaaagg gatcagcatg	3720
263	agactataac ttcttcttcc accctctgtc ccgtgacttc actctgcact cttcaaccaa	3780
265	tcaacgatct ccacccctca gcccactcca aaacccttga acacccttagc cccaaactct	3840
267	taggggagat ggatgtgagg tttcccccattc tctcctcatt cagtgcaccc acaattaaac	3900
269	ctgcttctct gctgcaaacc agttataact gtatgtggct cattggccag tgcacacago	3960
271	aaatcaacag gagacactgg gttgcaggag agaagaggtt tcatcgtagg gtggccaaaa	4020
273	gagatgagga gttgaagaat gtgggtgaa gtcacgggac agggagatga agaagccaca	4080
275	ttctcatgct gatccattc cccagtgggt agccttcaca ctgggtgctg gaattcaagg	4140
277	tctgaaaagc atcttttac atttttgtt atgtattttt tattattttt attatttttta	4200
279	ttattattttt tattattttt gagatggagt ctcactctgt ctcccaggtt ggagtatagt	4260
281	ggtacaatct cggtctactg caacctctgc ctccctgggtt caagcaattc tcctgtctca	4320
283	gcctccttag tagctggat tacaggtgtg aaccacctcc cccaccacc tcoactccgc	4380
285	taatgtcctt tgtatttta gtagagatag gtttcacca tggactgg gttgatctt	4440
287	aagtccctgac ctcaagtgac ctacccaccc cagcctccca aagtgttggg attatgggt	4500
289	tgagccaccg tgcctggccc tggaaagcat cttaagtgtat ttttcttta aaaaaagcct	4560
291	tatgactcta atatcagaga ttctgtctat aggaacaatg ggggtgcaca tggtcagttat	4620
293	ctagctctac ctgagttta gcaacaagga aatggacca agtgcagccc gaataacact	4680
295	taattataag tatgtttctg tccagaaccc agcatgcaat tcttgcaccc cctgtggaa	4740
297	tggtttcaca gtgtctcgat atactgaccc gctgtgtca ttggcaaca aacctattac	4800
299	aattacacat ggatgttaact ggaggtcatt acattaattt aaataagcca ggcacagaaa	4860
301	gataaacaat gcatgttctt actcccaatg ggaagctaaa aaagttgatc acatggaggt	4920
303	agagaatgga atgatggata cttagactg gggaaaggcgat atgggtgggg tgggtgggg	4980
305	agagaggtt gttataacac cttagacagaa ggaataagtt ccctttttt ttgagacgga	5040
307	gtctcactct gttggccagg ctggaggca gtggcacaat ctcagctcac tgcaacctct	5100
309	gcctcttggg ttcaagcaat ctcctgcct cagcctccag agtagctcg attacaggca	5160
311	cgtgccacca taacccgctt atttttttt tttttcaga cggagtctca ctctgtcacc	5220
313	caggctggag tgcagtggca caatctcagc tcactgcaag ctccacccctt caggttcacg	5280
315	ccattctctt gcctcagcct gccgagtgc tggactata gacgcctgac accacgcccc	5340
317	gctaattttt tgtatttta gtagagatgg gtttcaccc cgttagccag gatggcttt	5400
319	atctcctgac ctgcgtatct gcccgtctcg gcctccaaa gtgctggat tacaggcgtg	5460
321	agccaccacg cccggcaaga acttttaatg ttttttatct ataggatgtt gcaatcatca	5520
323	tctttaaaca ttagacatgg aatctttata ataatctgc catatatata tatatatata	5580
325	tatTTTTTTT TTTTTTTT TTTTTTTT gacactgagt ctcactttat cgcccccaggct	5640
327	ggagtacagt ggcacaatct tggctacta caacctccac ctccctgggtt caagtgattc	5700
329	tcctgcctca gccaccccaag tggctggggc ctacaggcgat gcaccaccc atccagttaa	5760
331	ttttttttt ttttttggaa cggagtctcg ttctgtcgcc caggctagag ttcaatgggg	5820
333	agatctcagc tcactgaaac ctccgcctt ggggttcaag caagcaattc tctgcccacag	5880
335	cctcccgact agctggattt agaagtggcc accaccacgt ctggctaatt tttgtatTTT	5940

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/552,610

DATE: 02/21/2007  
TIME: 14:07:54

Input Set : A:\00852982.TXT  
Output Set: N:\CRF4\02212007\J552610.raw

337 tagtagagac	ggggttcat	catctggcc	agactggct	tgaactcctg	accgggtat	6000
339 ccacccacct	cggctcccc	aagtactggg	attacaggcg	tgagccactg	cgcctggccg	6060
341 gttaatttt	atatttcag	tagagacagg	atttcaccac	gctggctagg	ctggtctcaa	6120
343 actcctgacc	tcaggtgatc	cacccgcott	ggccactgtg	cctggtaac	agtctttcta	6180
345 ttttattct	aggctggaga	cctttgtctc	aaaaacaaaa	cgagaatgt	ccctggagtc	6240
347 tgtaactgatc	cctctccct	cccaccgtag	attagtttc	tccttgatt	taaaaagacc	6300
349 ttctggctg	gcatccagt	aatgaattgt	ggaggagggg	gagaaggaga	.gagaaggcag	6360
351 gtagctcagt	gggaaagcta	ctgcaaaatc	ctggcaagca	atgacagtac	cttgaatcag	6420
353 ggctgggtgc	agttggatca	gggtggtagg	gaaaggagga	aatggataaa	tttggatgt	6480
355 atttggaggt	agagccagca	ggatttgcg	acaactggg	tttaaagtca	aagagagaaa	6540
357 tcaaggttaa	acctgacaaa	taaaaacaga	tgtggtctca	ggcgagtaga	gacattatgc	6600
359 agaaagacta	ttgcatcagg	gggaaagatg	gctgtaaaaa	caatgaacaa	gaccagaatc	6660
361 tgataaccca	gaaggatgt	ttgtctaatg	aaactaattt	tttccctcc	tccttatttt	6720
363 ttttgagac	ggagttcac	tcttgtgcc	caagctggag	tgcaatggcg	cgatctcgcc	6780
365 tcactgcaac	ctccgcctcc	gggattcaag	cgattctcct	gcctcagcct	ccctgagtag	6840
367 ctgggattac	aggcatgcac	caccacac	ggctaatttt	gtattttag	tagagacggg	6900
369 gtttccacat	gttggccagg	ctggtctcaa	actcctgacc	tcaggtgatc	tgcccacctc	6960
371 agcctcccaa	agtactggg	ttgcaggcat	gagacaccgc	gcccggcctc	tccttatattt	7020
373 ttttgtcattc	agcaagtgaa	aaagatggta	tacctttac	.agaggttaagg	aaggagggtg	7080
375 gagaaagtat	tcccaagatgg	ggtgggaagc	tggtacagcc	cactttgcag	gaggtggggg	7140
377 aatcggaat	tcttttatat	ccatgaagtt	tgagatgtct	gttagcttc	ccaggggttag	7200
379 aacagaggga	gcagataggc	tcaaggttgg	atttggaaacg	tcctagaaac	cttccagaac	7260
381 aaggcaaagg	aggaactgag	aactggcatt	tacttcata	caagagcgt	tgagcctccc	7320
383 cacccctcct	cctttggctt	cagggcaccc	ctggaatgtt	agaggctaga	atcaatgcta	7380
385 aagaagacca	cagtcaagga	ttccccagac	tccaggagc	actctggcta	tgctctttag	7440
387 agaaagggt	ctggactaga	atacaaattt	caagattgc	ggccgggggc	agtggtcat	7500
389 gcctgtatc	ccagcaactgt	gggaggccga	ggtggtaaa	ttgcctgagg	tcaggaggc	7560
391 gagaccagcc	tggccaaacat	ggtgaaaccc	caactctact	aaaaatacaa	aagtagctg	7620
393 ggagtggtgg	tggcgctt	taatcccagc	tactcaggag	gctgaggcag	gagaatcaca	7680
395 tgaacccagg	aggcagagat	tgcagtggc	caagatcg	ccactgca	ccagcctggg	7740
397 caacagagcg	agaccctgtc	tcaaaaaaaaaa	attgtaaaa	ttctaagaat	ctaatttttt	7800
399 tttttttttt	ttttttttt	agacggagtc	tcgctctgtc	gcccaggctg	gagtgcagtg	7860
401 gcggtatctc	ggctcaactgc	aagctccgccc	tcccgggttc	acgcattct	cctgcctcag	7920
403 cctcccaagt	agctggact	acaggcgc	gccactacgc	ccggctaatt	ttttgtattt	7980
405 ttagtagaga	cggggttca	ccattttagc	caggatggc	tcgatctcct	gacccgtg	8040
407 tccggccgccc	tcagcctccc	aaagaatcta	atattttaaa	actccagcat	atgcaactca	8100
409 aagctcatct	aattatacac	ttaagagtt	tgtatttcat	tgtatataag	ataccttgag	8160
411 gaacaaaaag	tatctgtaaa	caaatactga	gctctagcta	ctgatatgc	tgctgtatgt	8220
413 tttgggagtg	aagtgtactg	gtatctgca	ctgactttga	aatgcttaaa	aaaaaatcaa	8280
415 tggataggca	aaatgaacag	atatgtatg	aaaaaagggc	caggcacagt	ggctcatgcc	8340
417 tgaatccca	gcactttggg	aggctgaggt	gagaagatca	cctgaggtca	ggagtttgag	8400
419 accagcctgg	tcaacatggc	aaaaaccccg	tctctactaa	aaataaaaaa	aatagccagg	8460
421 catgggtgg	cacgcctgta	atcgcagcta	cttgagaggc	tgaagcagga	gaattgcttg	8520
423 aacccgggag	gcagagggtt	caatgagcca	agactgtatg	ctattgcact	ccactctggg	8580
425 caacagagtg	agactctatc	tcaaacaaaa	aaagaataga	tagtaacaa	agaaaggata	8640
427 ataaaaatggt	ggaatctgat	gggtatacag	gtgttcactg	tatgtttgaa	attnaatat	8700
429 ttttataata	aaatacgaaa	tcaaaatgca	aagcaaacaa	agtaactgccc	ctgctgaaaa	8760
431 cccctccaga	cagctccgt	ttgcaataga	aataaaatgc	agtctttcc	aagaccttgc	8820
433 aagatggccc	ctgcagactt	catgaatott	atctcctaca	ttcaatctt	gaaaatataaa	8880

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/552,610

DATE: 02/21/2007

TIME: 14:07:55

Input Set : A:\00852982.TXT

Output Set: N:\CRF4\02212007\J552610.raw